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PATENT
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN THE APPLICATION OF:

RICHARD MARTIN BROGLIE ET AL. CASE NO.: BB1334 USNA CNT1

APPLN. NO.: UNKNOWN GROUP ART UNIT: UNKNOWN

FILED: CONCURRENTLY HEREWITH EXAMINER: UNKNOWN

FOR: GENES FOR MUTANT MICROSOMAL DELTA-12 FATTY ACID DESATURASES AND RELATED ENZYMES FROM PLANTS

Date: AUGUST 22, 2000

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Preliminary Amendment

This is submitted to facilitate prosecution of the above-identified application.

In the Claims

Kindly amend the following claims:

B1

1. (Amended) A plant containing a recombinant nucleic acid construct, said construct comprising at least one seed-specific regulatory sequence operably linked in sense orientation to a mutant delta-12 fatty acid desaturase gene encoding a [protein] delta-12 fatty acid desaturase gene product having [a] at least one mutation which renders said desaturase gene product non-functional, said mutation being in a [His-(Asp/Glu)-Cys-(Gly/Ala)-His] His - X - Cys - Y - His (SEQ ID NO:17) amino acid region wherein X is selected from the group consisting of Asp and Glu and Y is selected from the group consisting of Gly and Ala, and further wherein said construct confers [altered fatty acid composition] decreased linoleic acid content in seeds of said plant.

B2

4. (Amended) The plant of claim 3, wherein seeds of said [altered fatty acid composition] plant comprise [comprises] from about 1.0% to about 10.0% linoleic acid, based on total fatty acid composition.

B2

5. (Amended) The plant of claim 1, wherein seeds of said [altered fatty acid composition] plant comprise [comprises] from about 69% to about 90% oleic acid, based on total fatty acid composition.

6. (Amended) The plant of claim 1, wherein said mutant desaturase gene encodes a microsomal delta-12 fatty acid desaturase gene product.

B3

29. (Amended) A recombinant nucleic acid construct effective for [altering fatty acid composition] decreasing linoleic acid content in seeds, said construct comprising at least one seed-specific regulatory sequence operably linked in sense orientation to a mutant delta-12 fatty acid desaturase encoding a delta-12 fatty acid desaturase gene product having at least one mutation which renders said desaturase gene product non-functional, said mutation being in a His - X - Cys - Y - His (SEQ ID NO:17) amino acid region wherein X is selected from the group consisting of Asp and Glu and Y is selected from the group consisting of Gly and Ala.

In the Specification

Kindly amend the specification as follows:

B4

At page 7 at line 18, please add --SEQ ID NO:17 is a 5 amino acid sequence in which at least one mutation in the conserved three amino acids of this motif renders the delta-12 desaturase gene product non-functional.--

At page 12, line 33, please delete "nucldotides" and insert therefor --nucleotides--.

At page 18, line 19, please delete "enzyme" and insert therefor --mutant--.

At page 28, line 21, please delete "(Table 5)",and substitute therefor --(Table 2)--.

N.E.

At page 29, in Table 2, middle column, please underline E and G in lines 1 and 2. Please underline D and A in line 3. Please underline D and G in lines 4 and 5.

N.E.

At page 37, line 28, please delete "6 and 7", and substitute therefor --3 and 4--.

N.E.

At page 38, line 29, please delete "6", and substitute therefor --3--.

Remarks

This case is a continuation under 37 CFR §1.53(b) of Application No. 09/232,948 filed on January 19, 1999.

The claims have been clarified to recite that the microsomal gene product is the delta-12 enzyme. In addition, claim 1 now also recites that there is at least one mutation in the cited region which renders the delta-12 desaturase gene product non-functional. Support for the motif (including conservative substitutions) recited in claim 1 can be found in Table 2 on page 27 of the specification.

The claims have been amended to recite that the linoleic fatty acid content is decreased and that non-functional mutants are claimed.

Submitted herewith are an updated Sequence Listing and a substitute paper copy. Support for SEQ ID NO:17 can be found in Table 2 on page 29. Thus, no new matter has been added.

The Brief Description of the Sequence Descriptions section of the specification has been amended to refer to SEQ ID NO: 17.

Enclosed herewith along with this Preliminary Amendment is an Information Disclosure Statement setting forth all references which had been cited by Applicants or the Examiner in connection with Serial No. 09/232,948 and some additional information as well as a petition for a three (3) month extension of time. Also submitted herewith are exact copies of papers that were submitted with the parent application (Serial No. 08/728,025) to correct inventorship. The original papers can be found in the parent file.

Please charge any fees which are required in connection with the filing of this Preliminary Amendment, Information Disclosure Statement, Declaration in Accordance With 37 CFR 1.821, and Petition for Extension of Time to Deposit Account No. 04-1928 (E. I. du Pont de Nemours and Company).

Respectfully submitted,

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Enclosures